REMARKS

This amendment is responsive to the Office Action dated October 21, 2008. Applicant has amended claims 1, 7-9, 13, 26, 31, 32, 35, 39, 40, 42, 51, 54, 56 and 58. Applicant has also cancelled claims 3-6, 28-30, 52, 53 and 55. Claims 1, 2, 7-27, 31-51, 54 and 56-59 are pending.

Claim Rejection Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-59 under 35 U.S.C. 102(e) as being anticipated by Ho et al. (US 6,910,148)). Applicant respectfully traverses the rejection to the extent such rejection may be considered applicable to the amended claims. Ho fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

For example, Ho lacks any teaching to suggest a method comprising managing state information within a primary control unit included within a device, wherein the state information comprises information representing a current state of one or more consumers included within the device, wherein managing the state information comprises (i) managing the state information within a temporally-ordered data structure, (ii) utilizing, for each of the consumers, a commit proposal and a commit marker pair to identify a portion of the state information for each of the consumers and (iii) setting, for each of the consumers, the corresponding one of the commit markers to identify a most recent object of the temporally-ordered data structure that has been communicated to and for which an acknowledgement has been received from the respective one of the consumers, as required by Applicant's currently amended claim 1.

Ho further lacks any teaching to suggest the method also comprising receiving, with the primary control unit, a change to the state information and prior to communicating the change to the consumers of the state information included within the device, communicating to a standby control unit included within the device the change performed by the primary control unit to the state information to synchronize the state information between the primary and standby control units, wherein communicating the change to the standby control unit comprises (i) replicating the temporally-ordered data structure within the standby control unit and (ii) replicating the commit proposal and the commit marker to the standby control unit, as recited by Applicant's currently amended claim 1.

Ho also lacks any teaching to suggest the method further comprising, after synchronizing the state information between the primary and standby control units, communicating, with the primary control unit, the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers in accordance with the portion of state information identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure, wherein at least one of the consumers comprises a forwarding component, as required by Applicant's currently amended claim 1.

In particular, Ho is silent with respect to the limitations of Applicant's claim 1 that requires (i) managing the state information within a ***temporally-ordered data structure***, (ii) utilizing, for each of the consumers, ***a commit proposal and a commit marker pair*** within the temporally-ordered data structure to identify a portion of the state information for each of the consumers and (iii) setting, for each of the consumers, the corresponding one of the commit markers to identify a most recent object of the temporally-ordered data structure that has been communicated to and for which an acknowledgement has been received from the respective one of the consumers, as required by Applicant's currently amended claim 1. Ho, as discussed below, makes no mention of how information is replicated between the Ho active and standby cards, and instead the Examiner merely presumes apparently by way of impermissible hindsight that Ho's replication utilizes a temporally-ordered data structure with commit proposal/commit marker pairs.

Applicant notes further that Ho is also silent with respect to teaching or even so much as suggesting (i) replicating the temporally-ordered data structure within the standby control unit and (ii) replicating the commit proposal and the commit marker to the standby control unit, as recited by Applicant's currently amended claim 1. Again, as Ho lacks so much as a suggestion of Applicant's temporally-ordered data structure and commit proposal/commit marker pairs, Applicant submits that Ho therefore lacks any teaching or suggestions concerning **replication of this particular data structure, as well as, replicating the commit proposal/commit marker pairs within the data structure**.

In addition, Applicant contends that Ho lacks any teaching to suggest communicating, with the primary control unit, the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers in accordance with the

portion of state information identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure, as required by Applicant's currently amended claim 1. Once more, Ho lacks any teaching of the data structure and therefore lacks any teaching to utilizing this data structure to communicate changes to the consumer. Moreover, Applicant notes that Ho, insomuch as Ho teaches to replication of state changes between active and standby cards, lacks any teaching to suggest that the consumer is included within the same device as both the primary and standby controllers. The Examiner merely supposes this limitation to be true without referencing any teaching or suggestion in Ho to support this supposition. This is improper.

Ho, when properly construed, teaches to an active controller that replicates received state changes to a standby controller.[1] Column 11, line 11 through column 12, line 38 of Ho teach to how this replication proceeds and the Examiner cites this portion to contend that Ho teaches to a temporally-ordered data structure and utilizing commit proposal / commit marker pairs to identify a portion of the state information. Yet, Ho teaches in column 11, lines 11-15 that the active card receives a message from a peer node to which the peer node requires a response. This peer node, according to column 11, lines 15-17 of Ho, needs to hear a confirmation that the redundant node received the update and is making the necessary changes "(i.e., committing to the message)." Apparently, Ho's use of the term "committing," when construed by the Examiner suggests a temporally-ordered data structure and utilizing commit proposal / commit marker pairs, as required by Applicant's currently amended claim 1. However, mere suggestion of committing to the message is not a sufficient basis on which the Examiner can rely to suggest the particular way in which Applicant's replication occurs.

Ho continues throughout the rest of column 11 from lines 17-49 to establish that the standby card "must commit to message[s] committed by [the] active card." Ho, yet again, fails to suggest how the standby card commits to the messages committed by the active card, and certainly nothing in this portion suggests that committing to the messages occurs by (i) replicating the temporally-ordered data structure within the standby control unit and (ii)

[1] Column 4, lines 50-51.

replicating the commit proposal and the commit marker to the standby control unit, as recited by Applicant's currently amended claim 1.

In fact, column 11, lines 50-62 of Ho explicitly describes a substantially different method by which to replicate state changes. Ho, in this portion, states that "after receiving MSG A, active card 910 sends message A to standby card 950." Sending a message detailing the update or state change is substantially different from replicating the temporally-ordered data structure within the standby control unit and replicating the commit proposal / commit marker pairs to the standby control unit, as required by Applicant's currently amended claim 1. Ho continues in this cited portion to suggest that the standby card then acknowledges MSG A, and only upon receiving this acknowledging does the active card commit to the message and send the commitment to the remote peer. In no way is it reasonable to construe this as the same as the replicating limitations required by Applicant's currently amended claim 1.

Applicant further notes that Ho lacks any teaching to suggest one or more consumers ***included within the device***, let alone communicating, with the primary control unit, the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers in accordance with the portion of state information identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure, as required by Applicant's currently amended claim 1. The Examiner, in rejecting claim 1, suggests that column 20, lines 40-65 of Ho suggest communicating the change to the consumer. Applicant can find no reference to a consumer and requests clarification with regard to the reasoning supporting this portion of the Examiner's rejection of claim 1. This portion of Ho specifically describes "a flow chart of an operation 1400 to update persistent information to a standby card 950." Clearly, the standby card is different from Applicant's consumer and more closely resembles Applicant's required standby controller.

FIG. 9 of Ho, which column 20, lines 40-65 of Ho references, shows an active card communicating with a standby card, but fails to even so much as hint at a consumer. Ho therefore not only fails to even so much as suggest a consumer, but lacks any teaching to suggest communicating, with the primary control unit, the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers in accordance with the portion of the temporally-ordered data structure identified by the respective

one of the commit proposal and commit marker pairs, as required by Applicant's currently amended claim 1. Moreover, as Ho is silent with respect to the temporally-ordered data structure or the commit proposal and commit marker pairs, Ho is silent with respect to communicating the change in accordance with the portion of state information identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure, as required by Applicant's currently amended claim 1.

Applicant notes that claim 1 has also been amended to require that at least one of the consumers comprise a forwarding component. Ho fails to teach this limitation as well. The Examiner merely points to a portion of Ho that teaches to a forwarding table when rejecting this limitation, previously required by Applicant's claim 56. A forwarding table is substantially different from a forwarding component. Moreover, even assuming the Examiner's construction is correct for the sake of argument, nothing in Ho suggests that the forwarding component receives any state information from either the active or standby control units, much less receive the portion of the state information identified by the commit proposal / commit marker pairs of the temporally-ordered data structure, as required by Applicant's currently amended claim 1.

Applicant submits that the above arguments apply, at least in part, to Applicant's other independent claims 16, 24, 42 and 51, as these claims either have been amended in a manner similar to that of claim 1 or previously recited limitations substantially similar to that of currently amended claim 1. As a result, Applicant submits that Ho fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

For example, Ho lacks any teaching to suggest a method comprising maintaining, with a primary control unit of a device, state information within a temporally-ordered data structure, wherein the state information comprises information representing a current state of a consumer included within the device, communicating a portion of the state information that corresponds to a change in the state information to the consumer included within the device so as to update consumer state information maintained by the consumer with the change, and encoding a commit proposal and a commit marker within the temporally-ordered data structure to identify the portion of the state information communicated to the consumer, as required by Applicant's previously presented claim 16.

As another example, Ho lacks any teaching to suggest a device comprising a primary control unit, a standby control unit, and one or more consumers, wherein at least one of the consumers comprises a forwarding component and wherein the primary control unit manages state information, receives a change to the state information, communicates the change to the state information to the standby control unit before communicating the changes to the consumers to synchronize the state information between the primary and standby control units, and after synchronizing the state information between the primary and standby control units, communicates the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers with the change, as required by Applicant's currently amended claim 26.

Ho also lacks any teaching to suggest the device of currently amended claim 26, wherein the state information comprises information representing a current state of the consumer included within the device, wherein the primary control unit further (i) manages the state information within a temporally-ordered data structure, (ii) utilizes, for each of the consumers, a commit proposal and a commit marker pair to identify a portion of the state information for each of the consumers and (iii) setting, for each of the consumers, the corresponding one of the commit markers to identify a most recent object of the temporally-ordered data structure that has been communicated to and for which an acknowledgement has been received from the respective one of the consumers.

Ho further lacks any teaching to suggest the device of currently amended claim 26, wherein the primary control unit also (i) replicates the temporally-ordered data structure within the standby control unit and (ii) replicates the commit proposal and the commit marker to the standby control unit, and wherein the primary control unit further, after synchronizing the state information between the primary and standby control units, communicates the change to the at least one of the consumers to update the consumer state information maintained within the at least one of the consumers in accordance with the portion of state information identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure.

As yet another example, Ho lacks any teaching to suggest a device comprising a consumer, a memory to store state information, and a control unit to maintain the state

information within a temporally-ordered data structure, wherein the control unit communicates a portion of the state information that corresponds to a change in the state information to the consumer so as to update consumer state information maintained by the consumer with the change, and encodes a commit proposal and a commit marker within the data structure to identify the portion of the state information within the temporally-ordered data structure, and wherein the state information comprises information representing a current state the consumer included within the device, as required by Applicant's currently amended claim 42.

As still yet another example, Ho lacks any teaching to suggest a computer-readable medium comprising instructions that cause a primary control unit to manage state information stored within the primary control unit included within a device, wherein the state information comprises information representing a current state of one or more consumers included within the device, wherein managing the state information comprises (i) managing the state information within a temporally-ordered data structure, (ii) utilizing, for each of the consumers, a commit proposal and a commit marker pair to identify a portion of the state information for each of the consumers and (iii) setting, for each of the consumers, the corresponding one of the commit markers to identify a most recent object of the temporally-ordered data structure that has been communicated to and for which an acknowledgement has been received from the respective one of the consumers and receive a change to the state information, as required by Applicant's currently amended claim 51.

Ho lacks any teaching to further suggest the computer-readable medium comprising instructions that cause a primary control unit to communicate the change to the state information in accordance with an order that requires the changes to be communicated to the standby control unit before communicating the changes to the consumers of the state information included within the device such that the state information is synchronized between the primary and standby control units, wherein communicating the change to the standby control unit comprises (i) replicating the temporally-ordered data structure within the standby control unit and (ii) replicating the commit proposal and the commit marker to the standby control unit, and after synchronizing the state information between the primary and standby control units, communicate the change to at least one of the consumers to update consumer state information maintained within the at least one of the consumers in accordance with the portion of state information

identified by the respective one of the commit proposal and commit marker pairs of the temporally-ordered data structure, wherein at least one of the consumers comprises a forwarding component, also as required by Applicant's currently amended claim 51.

Applicant further submits that the arguments made above with respect to independent claims 1, 16, 26, 42 and 51 apply to claims 2, 7-15, 17-25, 27, 31-41, 43-50, 54 and 56-59 by virtue of these claims 2, 7-15, 17-25, 27, 31-41, 43-50, 54 and 56-59 depending from respective claims 1, 16, 26, 42 and 51.

Ho fails to disclose each and every limitation set forth in claims 1, 2, 7-27, 31-51, 54 and 56-59. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicant's claims 1, 2, 7-27, 31-51, 54 and 56-59 under 35 U.S.C. 102(e). Withdrawal of this rejection is requested.

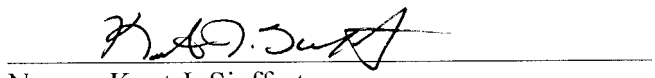
CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

January 21, 2009

By:



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